Claims:

1. A confocal optical system aperture position detector, comprising:

a light source;

first focusing means for focusing light exiting from the light source onto a sample;

second focusing means for focusing light having passed through the sample or light reflected on the sample;

an aperture provided at a focusing point position of the second focusing means; and

a detector that receives light having passed by the aperture at plural light reception regions.

2. The confocal optical system aperture position detector according to Claim 1, wherein:

the light reception regions of the detector are divided so as to be capable of detecting a 2-D position of light that passes by the aperture.

3. The confocal optical system aperture position detector according to Claim 1 or 2, wherein:

the aperture has a pin hole and the detector has four divided light reception regions.

4. The confocal optical system aperture position

detector according to any one of Claims 1 through 3, wherein:

a material of the aperture is an electrically good conductor.

5. The confocal optical system aperture position detector according to any one of Claims 1 through 4, wherein:

the first focusing means and the second focusing means are one and the same.

6. A confocal optical system aperture position controller comprising:

a light source;

first focusing means for focusing light exiting from the light source onto a sample;

second focusing means for focusing light having passed through the sample or light reflected on the sample;

an aperture provided at a focusing point position of the second focusing means;

a detector that receives light having passed by the aperture at plural light reception regions;

driving means for driving an optical member, which is any one of the light source, the second focusing means, and the aperture, within a plane perpendicular to a local optical axis accompanying the optical member; and

control means for controlling the driving means on the

basis of a quantity of light received at each of the plural light reception regions of the detector.

7. The confocal optical system aperture position controller according to Claim 6, wherein:

the driving means is used as first driving means;

the controller further comprises second driving means for driving an optical member, which is any one of the light source, the second focusing means, and the aperture, in a direction parallel to a local optical axis accompanying the optical member; and

the control means controls the first and second driving means on the basis of the quantity of light received at each of the plural light reception regions of the detector.

8. A confocal optical system aperture position controller comprising:

a light source;

first focusing means for focusing light exiting from the light source onto a sample;

second focusing means for focusing light having passed through the sample or light reflected on the sample;

an aperture provided at a focusing point position of the second focusing means;

a detector that receives light having passed by the

aperture at plural light reception regions;

a parallel plate provided between the second focusing means and the aperture;

driving means for tilting the parallel plate with respect to an optical axis of light that passes through the parallel plate; and

control means for controlling the driving means on the basis of a quantity of light received at each of the plural light reception regions of the detector.

9. The confocal optical system aperture position controller according to any one of Claims 6 through 8, wherein:

the first focusing means and the second focusing means are one and the same.

10. An optical head comprising:

a light source;

first focusing means for focusing light exiting from the light source onto an intended information layer in an optical recording medium formed by layering plural information layers;

first driving means for driving the first focusing means within a plane perpendicular to an optical axis of light that passes through the first focusing means;

second focusing means for focusing reflected light or transmitted light from the intended information layer;

an aperture provided at a focusing point position of the second focusing means;

a detector that receives light having passed by the aperture at plural light reception regions;

second driving means for driving an optical member, which is any one of the light source, the second focusing means, and the aperture, within a plane perpendicular to a local optical axis accompanying the optical member; and

control means for controlling the second driving means on the basis of a quantity of light received at each of the plural light reception regions of the detector.

11. An optical head comprising:

a light source;

first focusing means for focusing light exiting from the light source onto an intended information layer in an optical recording medium formed by layering plural information layers;

first driving means for driving the first focusing means within a plane perpendicular to an optical axis of light that passes through the first focusing means;

second focusing means for focusing reflected light or transmitted light from the intended information layer;

an aperture provided at a focusing point position of the second focusing means;

a detector that receives light having passed by the

aperture at plural light reception regions;

a parallel plate provided between the second focusing means and the aperture;

second driving means for tilting the parallel plate with respect to an optical axis of light that passes through the parallel plate; and

control means for controlling the second driving means on the basis of a quantity of light received at each of the plural light reception regions of the detector.

12. The optical head according to Claim 10 or 11, wherein:

the control means controls the first driving means in addition to the second driving means, and controls the first driving means according to a high frequency signal from the detector while controlling the second driving means according to a low frequency signal from the detector.

13. An optical head comprising:

a light source;

first focusing means for focusing light exiting from the light source onto an intended information layer in an optical recording medium formed by layering plural information layers;

first driving means for driving the first focusing means within a plane perpendicular to an optical axis of light that passes through the first focusing means;

second focusing means for focusing reflected light or transmitted light from the intended information layer;

an aperture provided at a focusing point position of the second focusing means;

a detector that receives light having passed by the aperture at plural light reception regions;

second driving means for driving an optical member, which is one of the second focusing means and the aperture, within a plane perpendicular to a local optical axis accompanying the optical member;

third driving means for diving an optical member, which is one of the second focusing means and the aperture, in a direction parallel to the local optical axis; and

control means for controlling the second and third driving means on the basis of a quantity of light received at each of the plural light reception regions of the detector.

14. The optical head according to Claim 13, wherein:

the control means controls the first driving means in addition to the second and third driving means, and controls the first driving means according to a high frequency signal from the detector while controlling the second and third driving means according to a low frequency signal from the detector.

15. The optical head according to any one of Claims 10 through 14, wherein:

the aperture has a pin hole and the detector has four divided light reception regions.

16. The optical head according to any one of Claims 10 through 15, wherein:

the first focusing means and the second focusing means are one and the same.

17. An optical information processor comprising:

the optical head according to any one of Claims 10 through 16; and

a driving mechanism that drives the optical recording medium.

18. A confocal optical system aperture position detecting method comprising:

a first focusing step of focusing light exiting from a light source onto a sample;

a second focusing step of focusing light having passed through the sample or light reflected on the sample;

a light detecting step of receiving light having passed by an aperture provided at a focusing point position in the second focusing step at plural light reception regions; and

a position detecting step of detecting a position displacement between the light and the aperture by detecting a position of a dark portion which is a region where luminance is lower than its surroundings in the light reception regions and generated when part of light focused in the second focusing step is shielded by the aperture while the light passes by the aperture in the light detecting step.

19. A confocal optical system aperture position detecting method comprising:

a first focusing step of focusing light exiting from a light source onto a sample;

a second focusing step of focusing light having passed through the sample or light reflected on the sample;

a light detecting step of receiving light having passed by an aperture provided at a focusing point position in the second focusing step at plural light reception regions; and

a position detecting step of detecting a position displacement between the light and the aperture by detecting a position of an asymmetric pattern of a quantity of light generated when light focused in the second focusing step is scattered by the aperture while the light passes by the aperture in the light detecting step.